News Release

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NASA Tests Alleged Lunar Material

On December 17, 1999, the NASA Lunar Sample Curator's Office submitted a report to the Office of Inspector General pertaining to the examination of alleged lunar materials contained in a souvenir desk pen set belonging to Ms. Peggy Davis. The report stated that based on an examination under a microscope at up to 80 times magnification, the particles submitted for testing did not exhibit any characteristic features commonly associated with lunar soil. The Curator's Office also stated that the examination was limited because of the small size of the particles. More extensive and, perhaps, inconclusive determination of the origin of the particles would require removal of the particles which would result in significant damage to the epoxy model. A copy of the complete report is attached.

NASA became involved in determining the characteristics of the particles in the desk pen set only after a memorabilia dealer representing Davis contacted the Office of Inspector General inquiring about legal sale of the items. On September 24, 1999, the desk set was voluntarily released to NASA for the purpose of non-destructive examination of purported lunar materials. The Office of Inspector General is returning the desk set to Ms. Davis' attorneys. Special Agents of the NASA Office of Inspector General conducted the investigation.

- End -

National Aeronautics and
Space Administration

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Reply to Attn of: SN2-99-322

December 17, 1999

TO: W-JS/ NASA Office of Inspector General

FROM: SN2/G. E. Lofgren, Lunar Sample Curator

SUBJECT: Examination of Model Rock Allegedly Containing Lunar Dust (Case Number I-S-99-056)

I have examined an epoxy model of a rock mounted on a black base to determine if there is lunar dust in the model. The model is approximately 5 by 6 by 3.5 cm. I viewed the model under a microscope at up to 80 times magnification and was able to see a few dark gray particles and numerous bright red particles along with much more numerous bubbles. If there is lunar dust in this model, the dark gray particles are the most likely candidates. These particles are approximately 0.5 mm or less in their maximum dimension. I am not able to characterize these particles further because of their small size and because they are embedded in the epoxy. From what I am able to see, they did not exhibit any characteristic features commonly associated with lunar soil. The bright red particles are clearly not lunar because particles with these colors have not been reported on the moon.

To further examine the dark gray particles would require removing them from the epoxy and examining them with either a scanning or transmission electron microscope. This would require many man hours of labor and even that examination might not produce a definitive determination on the origin of the particles. To remove the grains from the model would result in significant damage.

I conclude on the basis of my microscopic examination that it is not possible to determine whether the dark gray particles in the epoxy model are of lunar origin. Further extensive testing with more sophisticated equipment would be necessary to determine their origin and that testing may not be definitive. Furthermore, additional testing would result in damage to the epoxy model.

Gary E. Lofgren